

What is claimed is:

1. A system comprising:

an electro-statically shielded enclosure,  
at least one processor external to the enclosure,  
at least one processor disposed in the enclosure, and,  
at least one dielectric media to couple the at least one processor external to the enclosure and the at least one processor disposed in the enclosure.

2. A system according to claim 1, further including:

at least one energy source external to the enclosure,  
at least one power supply disposed in the enclosure,  
at least one dielectric media to couple the energy source external to the enclosure and the at least one power supply disposed in the enclosure.

3. A system according to claim 2, wherein the at least one power supply disposed in the enclosure is in communications with the at least one processor disposed in the enclosure.

4. A system according to claim 2, wherein the at least one energy source is a laser.

5. A system according to claim 2, wherein the at least one power supply disposed in the enclosure is a laser energy power converter.

6. A system according to claim 2, wherein the at least one dielectric media to couple the at least one energy source external to the enclosure and the at least one power supply disposed in the enclosure includes a fiber optic cable.

7. A system according to claim 1, wherein the at least one dielectric media to couple the at least one processor external to the enclosure and the at least one processor disposed in the enclosure includes a fiber optic cable.

8. A system according to claim 1, wherein the at least one processor disposed in the enclosure includes at least one of a media access controller, a network processor, and an applications processor.

9. A system according to claim 1, further including a transceiver disposed in the enclosure, the transceiver in communications with the at least one processor disposed in the enclosure.

10. A system according to claim 1, further including at least one photo-diode to interface between the at least one processor external to the enclosure and the at least one processor disposed in the enclosure.

11. A system according to claim 2, further including a power monitor disposed in the enclosure, the power monitor in communications with the at least one processor disposed in the enclosure, and the power monitor in communications with the power supply disposed in the enclosure.
12. A system according to claim 1, further including a first connector and a second connector, wherein the first connector and the second connector are mated, and wherein the first connector is mounted to the enclosure, and the second connector is mounted external to the enclosure to provide an electrical connection to a sensor.
13. A system according to claim 12, wherein the second connector is mounted to a fuel tank, and the sensor is a fuel sensor.
14. A system according to claim 12, wherein the first connector is in communications with the at least one processor disposed in the enclosure.
15. A system for measuring fuel, the system comprising:
  - an electro-statically shielded enclosure,
  - at least one processor disposed in the enclosure,
  - a fuel tank, and,
  - a fuel sensor in communications with the fuel tank and the at least one processor disposed in the enclosure.
16. A system according to claim 15, further including:
  - a first connector mounted to the enclosure and in communications with the at least one processor disposed in the enclosure, and,
  - a second connector mounted to the fuel tank, the second connector mated to the first connector, the second connector in communications with the fuel sensor, and,
17. A system according to claim 15, wherein the fuel tank is an aluminum fuel tank.
18. A system according to claim 15, wherein the fuel sensor includes a variable capacitance transducer.
19. A system according to claim 15, further including at least one power supply disposed in the enclosure.
20. A system according to claim 15, further including a signal conversion device to accept an input from the first connector and provide an output to the at least one processor disposed in the enclosure.
22. A system according to claim 15, further including:
  - at least one processor external to the enclosure, and,

at least one dielectric media to couple the processor external to the enclosure and the at least one processor disposed in the enclosure.

23. A system according to claim 15, further including:

at least one energy source external to the enclosure,

at least one power supply disposed in the enclosure,

at least one dielectric media to couple the at least one energy source external to the enclosure and the at least one power supply disposed in the enclosure.

24. A system according to claim 23, wherein the energy source is a laser.

25. A system according to claim 23, wherein the at least one power supply disposed in the enclosure is a laser energy power converter.

27. A system according to claim 23, wherein the at least one dielectric media to couple the at least one energy source and the at least one power supply disposed in the enclosure includes a fiber optic cable.

28. A system according to claim 22, wherein the at least one dielectric media to couple the at least one processor and the at least one processor disposed in the enclosure includes a fiber optic cable.

29. A system according to claim 15, wherein the enclosure is mounted to the fuel tank.

30. A method for providing a measurement from a fuel tank, the method comprising:

providing an electro-statically shielded enclosure including at least one processor disposed in the enclosure,

providing at least one processor external to the enclosure,

providing a fuel tank sensor in communications with the fuel tank and the at least one processor disposed in the enclosure, and,

providing at least one dielectric media to couple the at least one processor external to the enclosure and the at least one processor disposed in the enclosure.

31. A method according to claim 30, further including:

providing at least one energy source external to the enclosure,

providing at least one power supply disposed in the enclosure, the at least one power supply in communications with the at least one processor disposed in the enclosure, and,

providing at least one dielectric media to couple the at least one energy source and the at least one power supply disposed in the enclosure.

32. A method according to claim 30, wherein providing at least one dielectric media to couple the at least one processor external to the enclosure and the at least one processor disposed in the enclosure includes providing a fiber optic cable.

33. A method according to claim 31, wherein providing at least one dielectric media to couple the at least one energy source and the at least one power supply disposed in the enclosure includes providing a fiber optic cable.

34. A method according to claim 30, wherein providing a fuel tank sensor in communications with the fuel tank and the at least one processor disposed in the enclosure, includes:

providing a first connector mounted to the enclosure and in communications with the at least one processor disposed in the enclosure,

providing a second connector mounted to the fuel tank, the second connector in communications with the fuel tank sensor and the second connector mated to the first connector.

35. A method according to claim 31, further including providing a power monitor in communications with the at least one power supply and the at least one processor disposed in the enclosure.